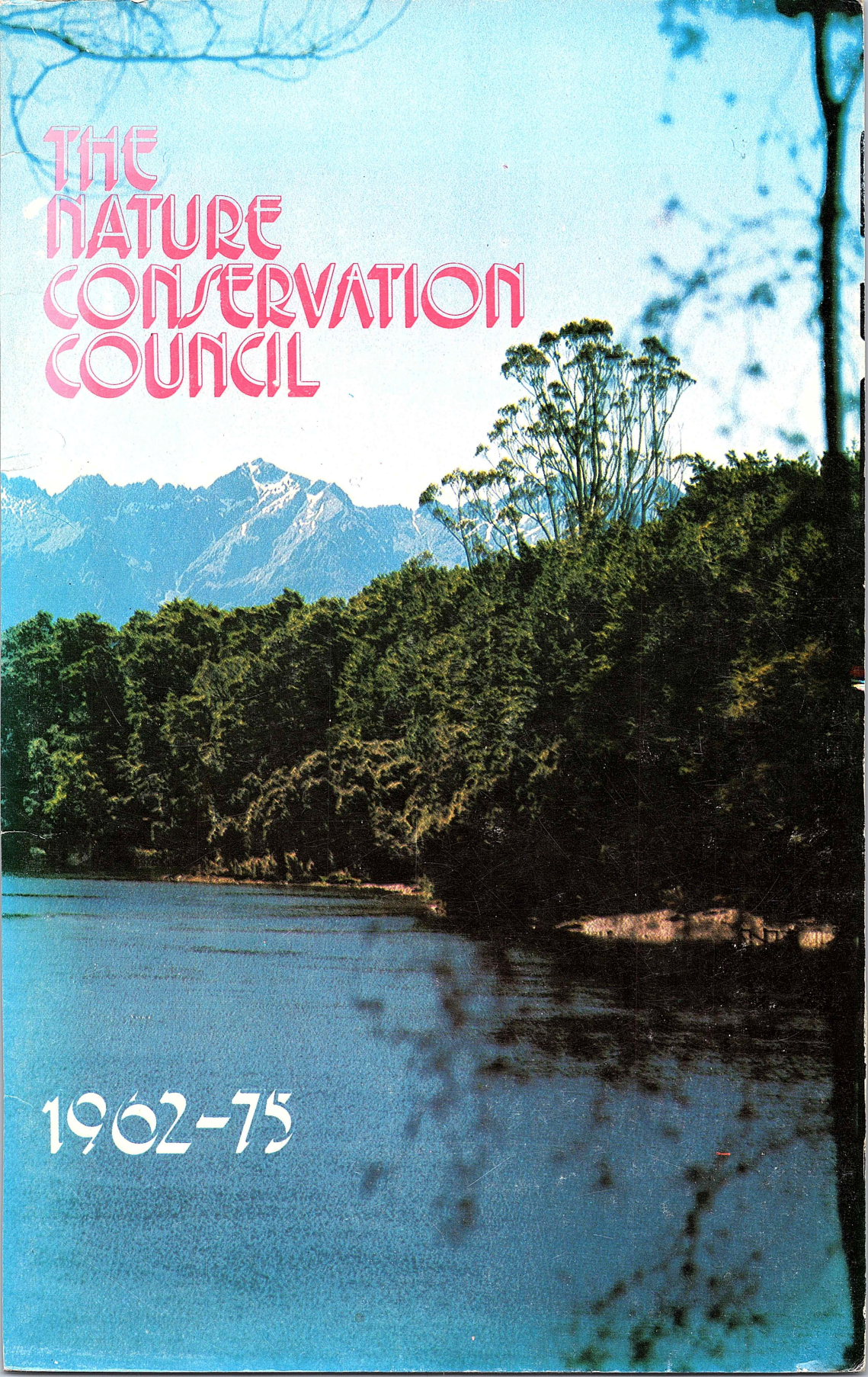
THE NATURE CONSERVATION COUNCIL



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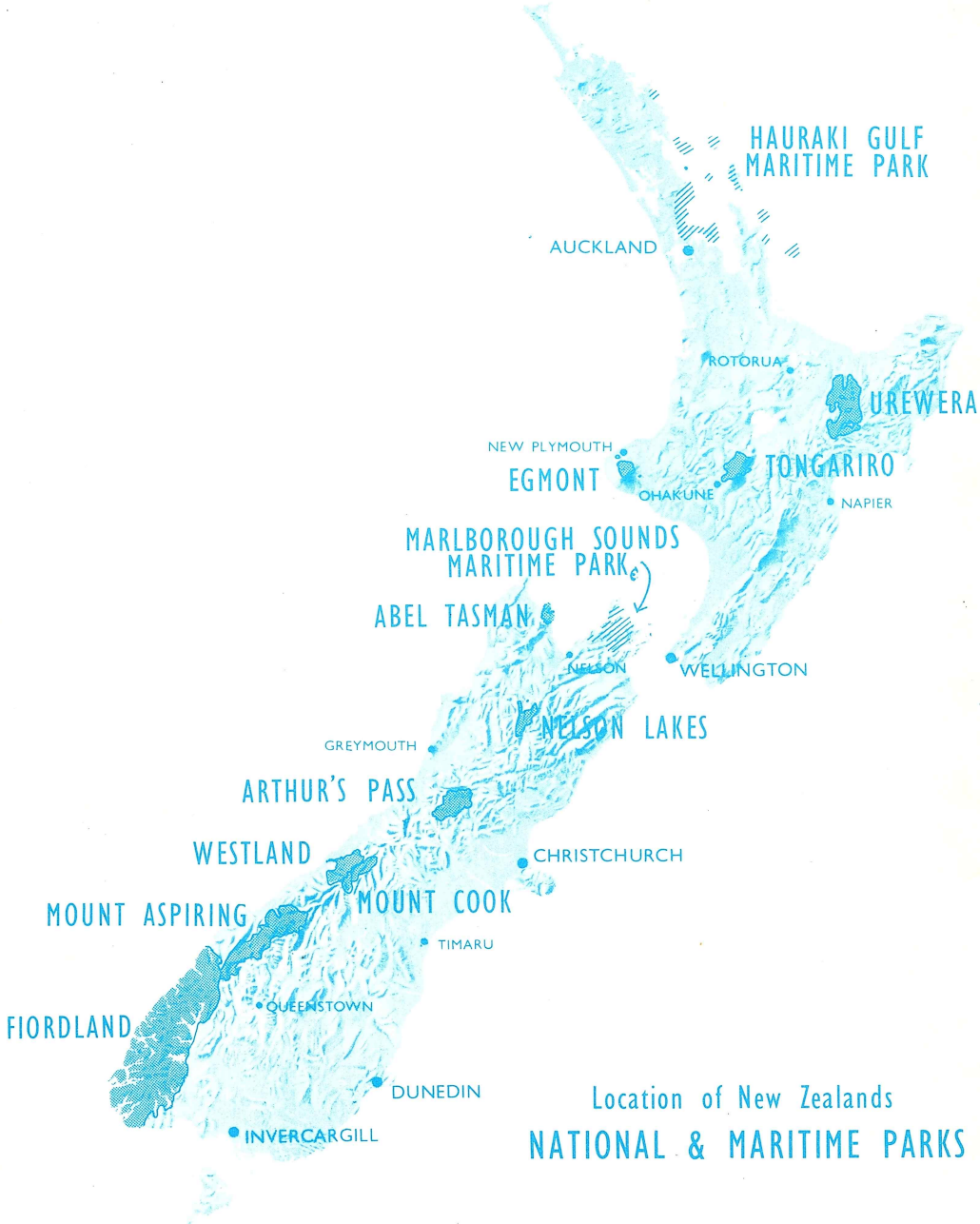

Location of New Zealands

NATIONAL & MARITIME PARKS

Cartography by the Department of Lands & Survey

THE NATURE CONSERVATION COUNCIL

1962-75

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FOREWORD

The Nature Conservation Council has 12 years of growth behind it. During that time it has not been developing alone. Public conscience about environment has deepened, and impact reporting has become essential for every project likely to have significant effects on the ecosystem. The council is by statute a sort of ombudsman independent of the Government. It is not one of the law enforcers that the Government have to listen to. But they increasingly do, in both large issues and small.

Under Sir Robert Falla's leadership the council's field and headquarters staff has grown, giving it increasing ability to assess and warn. In some ways the council's task has become easier since the pioneer days, in other ways more demanding. Its expertise is primarily with the natural environment, but cannot realistically be confined there. The big environmental controversies have become economic, and often politically sensitive. Any wise man—ecologist included—must try to recognise this, and be concerned—even from his specialist viewpoint—with his country's total strategy. It is the nature of ecology to be an intrusive discipline, with no firm frontiers.

The council has two main tasks. The first must be careful research—as time allows and need dictates—on individual case studies. The second is to set up general guidelines of action and forbearance. This educative task has already begun, with the outreach to schools and general public by the National Conservation Week Campaign each year and the council's publications. It will be continued by this timely booklet which is intended to help concerned citizens, activists, and the media to know more of the council and of its power to help.

A further part of our work is to educate administrators and politicians. And we ourselves need to be educated; each of us who—either by a close or limited acquaintance with ecology—becomes concerned about New Zealand's land and air and water and about the future of our own highly destructive human species.

JOHN MORTON,
Chairman, Nature Conservation Council.

INTRODUCTION

The story of man's life on Earth has mostly been one of change and progress. The unique thing about our time is not the *fact* of change, but the increasingly accelerated *rate* of change that has taken place since the Industrial Revolution, as rapid advances in technology have brought about unprecedented upheavals.

The effects of technology on the environment are reflected in the world-wide concern which has arisen so recently and so dramatically. It sometimes seems that everybody, from the university professor to the average man in the street, has climbed aboard the environmental bandwagon.

What is all the fuss about? "Too many people, and too much emphasis on economic growth", say the conservationists. Economic growth calls for expanding industry, which in turn means more pollution in the form of smoke and other wastes in the air, or chemical wastes discharged into lakes, rivers, and oceans. A high level of population means too much traffic giving off too many fumes, overcrowded living conditions, and urban areas spreading over the countryside.

All this increased activity inevitably affects the biosphere: that thin layer of earth, air, and water which sustains us. All our actions have a consequence, even if it does not become immediately obvious. An atomic bomb is exploded and may promote genetic defects for years to come; a chemical is added to the water of a clear stream and the fish die, or agricultural run-off flows into a lake, where it causes such an increase in plant growth that eventually all growth ceases through lack of oxygen.

All life is inter-related, and so are all aspects of our environment, just as man is intimately related to his surroundings. The Earth itself is a smaller place than we thought, and more delicate. The oceans are not limitless: Thor Heyerdahl reported finding persistent traces of oil and other forms of pollution even in the middle of the Atlantic.

We now have more power over nature than at any previous time. The important question is whether we are going to learn to work with nature or continue to try and ignore it or destroy it, until it destroys us. Obviously we cannot go back to the kind of pastoral life which was once universal, but by harnessing and restraining technology, we may be able to have the best of both worlds.

But environmental concern should not be directed simply at the more obvious forms of pollution and the spread of urban blight. Other, less spectacular, issues are just as important. In agriculture, for instance, overgrazing and overcropping can also be forms of pollution, giving rise to erosion, and eventually creating deserts. The effects of too much use of insecticides, pesticides, and fertilisers have been well publicised. It is possible to destroy insect pests or boost crop production by using chemicals, but sometimes this merely results in one problem being replaced by another.

Wise land-use for agriculture is one aspect of environmental control which can be easily assessed in economic terms. Certain other values are not so easily assessable. There is no economic argument (apart from tourism) for the preservation of wildlife and wilderness areas, but it does not take much imagination to see that a world depleted of many of its bird and animal species would be a poorer one, and it would be even poorer if there were no wild areas left unmarked by the presence of man.

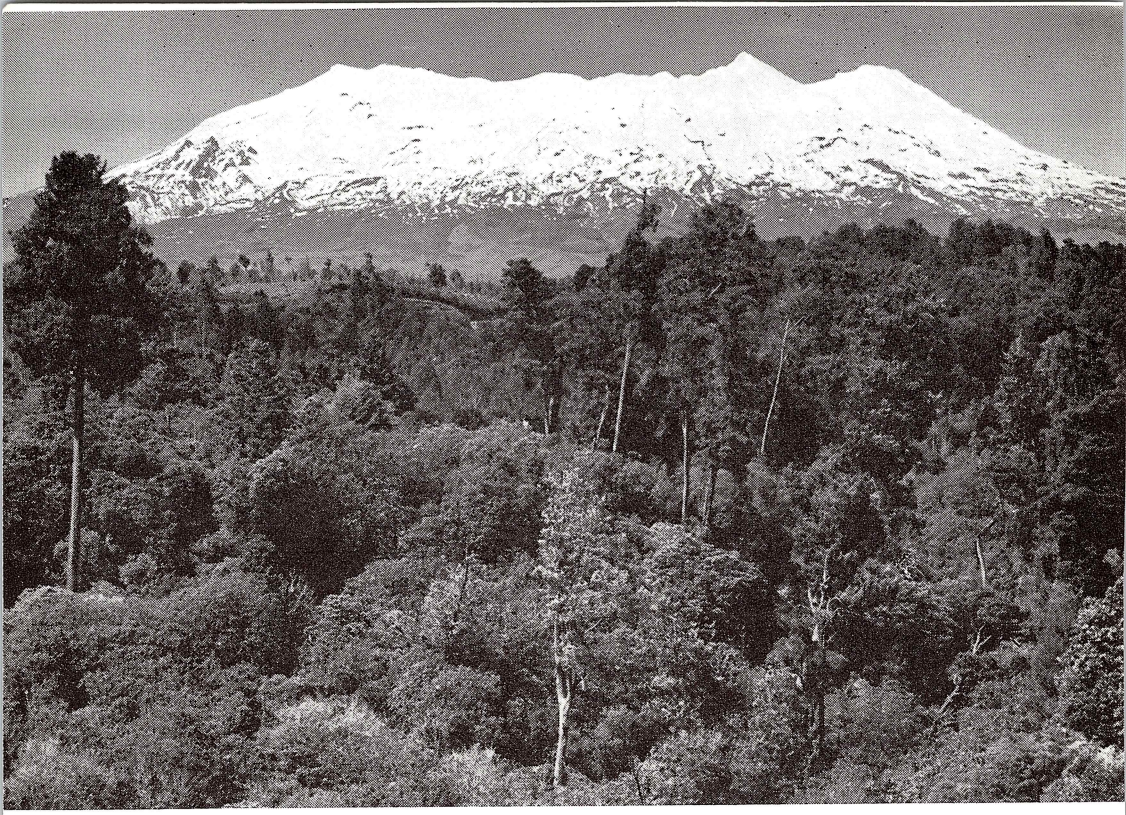
The choice that faces us is not between a return to the wild "unspoiled" nature of the romantic poets and a great leap forward into the concrete jungle. The first alternative is impossible, the second would be disastrous.

Many countries now have a Department of the Environment, or its equivalent. A world-wide United Nations Conference on the Human Environment was held at Stockholm in 1972. But awareness of the problem is only the first step towards its solution: the next steps must be more research and more planning, and above all, effective action. It is easy to resort to vague, emotional soap-box oratory on the subject of the environment. Hard facts are needed to prove that conservation is in our best interests, and to minimise future mistakes. Knowledge is the best way of preventing environmental degradation.

New Zealand has been reasonably fortunate. It is well provided with national parks, reserves, and sanctuaries; with some major exceptions, its land-use has been good; it is not yet overpopulated, and economically it has relied on agriculture rather than the more polluting forms of industry. But these factors will not remain constant, so there is no room for complacency. We should rather look to the mistakes other countries have made, and seek to avoid them here.

Environmental devaluation is insidious. A row of pylons in a scenic reserve, an estuary reclaimed, or polluted with sewage and chemicals, the destruction of a few acres of native bush, a fishing river destroyed, a lake raised: taken individually, such changes may not appear to have very drastic results. "We have plenty of scenery", argue the developers. But if we look ahead 50 years, and try to visualise a constantly increasing number of such "developments" the picture of what New Zealand could be like then is not so rosy.

Conservation is not simply a question of preserving things as they are, it is also concerned with the intelligent development of resources. Conflict does arise between economic expediency and maintaining pleasant surroundings in which to live. The best defence against unwise exploitation of the environment is the widest possible awareness of the *necessity* for conservation, and a refusal to measure human welfare in terms of "material" gain.



Mount Ruapehu, Tongariro National Park

CONSERVATION IN NEW ZEALAND

1. Preservation

New Zealand has been fortunate that the needs of land development and pressures of population have not encroached upon all the available resources that could be set aside for scenic and scientific preservation. The process of setting aside land, just under way at the turn of the century, has accelerated in recent years until there are now 2 152 677 ha, or just over 6 percent of the country, in national parks, and 467 024 ha in scenic, historic, and biological reserves. There is comprehensive legislation for the protection of native wildlife, and many otherwise exploitable lands have been set aside for wildlife preservation.

The world's first national park was established in the United States at Yellowstone in 1872. Tongariro was set up as New Zealand's first park in 1894, followed by Egmont and Fiordland. Further areas were added, but it was not until the National Parks Act of 1952 that the whole administrative structure was co-ordinated. At that time, there were five parks: Tongariro, Egmont, Arthur's Pass, Abel Tasman, and Fiordland. A further five have since been added: Mount Cook, Urewera, Nelson Lakes, Westland, and Mount Aspiring. The National Parks Act defined its purpose as "preserving in perpetuity as National Parks for the benefit and enjoyment of the public, areas of New Zealand that contain scenery of such distinctive quality and natural features so beautiful or unique that their preservation is in the national interest".

New Zealand's enlightened national parks policy is envied by many countries, and has given it a world-wide reputation.

2. Land Use

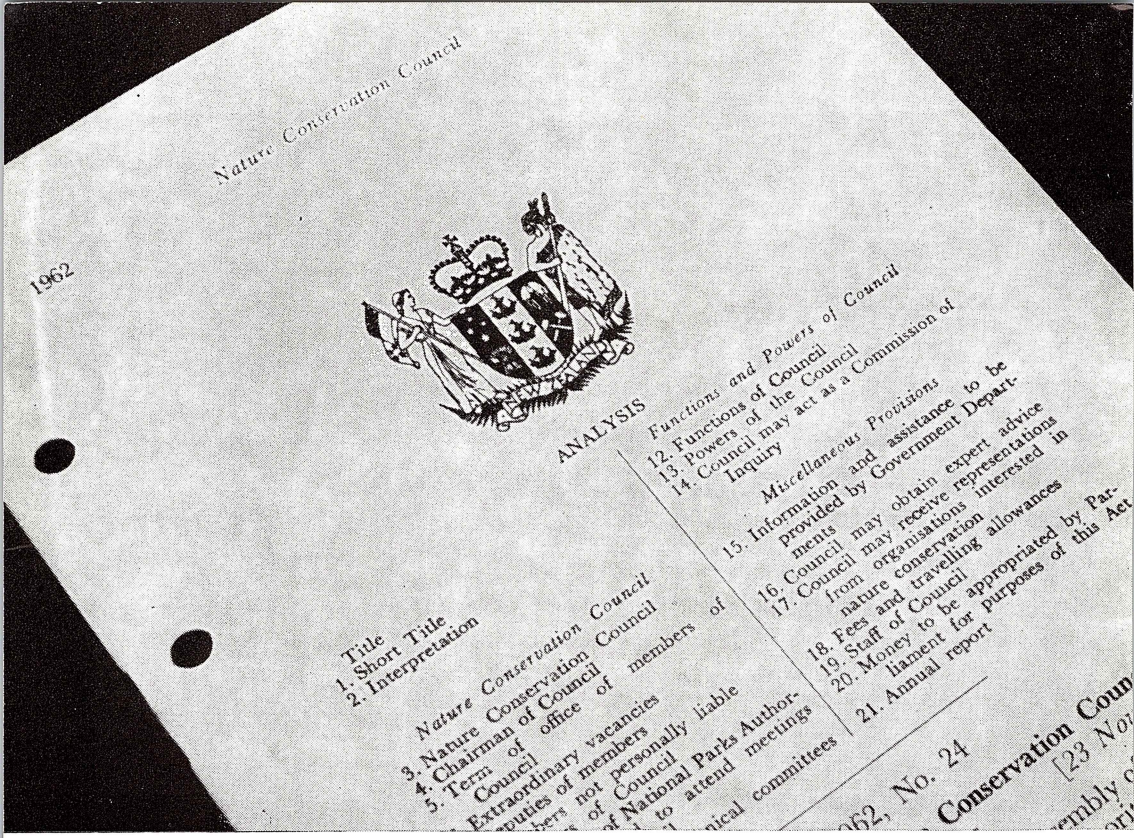
Conservation means more than simply setting aside parks and reserves: it implies wise use of all resources, including agricultural land.

In New Zealand the farmer is the custodian of a great deal of our physical environment. He can influence how much his land will yield, and also its appearance: the generally pleasant, green, and parklike appearance of much of our countryside is his responsibility.

Some serious land abuses did occur in New Zealand's early days. The first settlers cut and burnt off irreplaceable bush and tussock land. They did not anticipate the likelihood of erosion, particularly in the hill country, and noxious weeds and animals were introduced, to add to the problem.

Nevertheless, these mistakes were relatively minor compared with the destruction of soil cover and loss of soil fertility that took place in America from the Atlantic to the Rockies. The new New Zealanders imported enough of the British farming tradition for land exploitation in New Zealand to be moderated, and for good husbandry to be a guiding principle.

Erosion


Nature Conservation Council
1962
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THE SETTING UP OF THE COUNCIL

The Nature Conservation Council was set up under the Nature Conservation Council Act 1962, the main stimulus for it being the Government's concern at public reaction to its projected hydro-electric scheme at Lake Manapouri. The Government, surprised at the unprecedented concern of the New Zealand public over conservation issues, and over the issue of the possible raising of Lake Manapouri in particular, decided that an independent body should be created to advise on the best method of conserving the country's scenic areas and native flora and fauna.

The council was given certain powers through legislation which was in some ways ahead of its time, and seems to have partially anticipated the present environmental revolution. Specifically, the council may inquire into the effects of public works in areas of scenic, scientific, or recreational interest, and make recommendations to the Government through the Minister of Lands. An important part of the council's effectiveness lies in its ability to make public any of its reports or recommendations.

The council may report to the Government on the effects of any proposal to mine in a national park or scenic reserve.

It may advise the Government on the reservation of special scenic, scientific, or recreational areas, and the protection of plant or animal habitats.

On a broader scale, the council has the power to hold inquiries on any aspects of nature conservation, and to draw up and recommend to the Government a national policy for the conservation of nature, in co-operation with any interested parties.

Between seven and nine members may be appointed to the council by the Governor-General, for a term of up to 3 years. Members have specialised knowledge, scientific qualifications, or interest in nature conservation, and they come from all parts of New Zealand. The chairman of the National Parks Authority attends meetings as an observer.

The day-to-day work of the council is done by the staff of the Wellington office. Advisory officers on the council staff, as well as council members, make frequent inspections around the country, their reports forming the basis of the agenda for council meetings.

HOW EFFECTIVE IS THE COUNCIL?

The council does not have the power to prevent a Government action, and it is sometimes criticised because of this. All the same, it does enjoy advantages which no other conservation organisation possesses. Its right of access to Government departments and their information is a valuable product of the council's relationship to the Government.

On the other hand, the council works independently of the Government and has often criticised Government policy. If a decision of the council is over-ruled, it can be done only at Cabinet level.

Furthermore, by its ability to publish its findings and recommendations even when these are at variance with the Government, the council can apply a great deal of pressure, and act as a mouthpiece for public opinion, or help to guide it.

It should be emphasised that it is not the council's job simply to oppose development. It has the harder task of trying to ensure that development, where it is necessary, can go ahead with the least possible alteration or harm to the environment. The council has to deal with practicalities, and experience teaches that effective compromise is often better than a stand which opposes everything yet achieves nothing.

This is not to say that the council never totally opposes any project. It has frequently done so, and more often than not won its case.

The fact that Government departments and other bodies now as a rule come to the council with their projects rather than letting the council make suggestions after work has begun, is an encouraging sign of the growth of conservation awareness. It is now a fairly common occurrence for the Government not to proceed with a scheme unless and until it has been approved by the council, either in full or in modified form.

A further sign of the growth of awareness is the increase in representations to the council from groups and individuals concerned about particular conservation issues.

MANAPOURI - TE ANAU HYDRO-ELECTRIC SCHEME

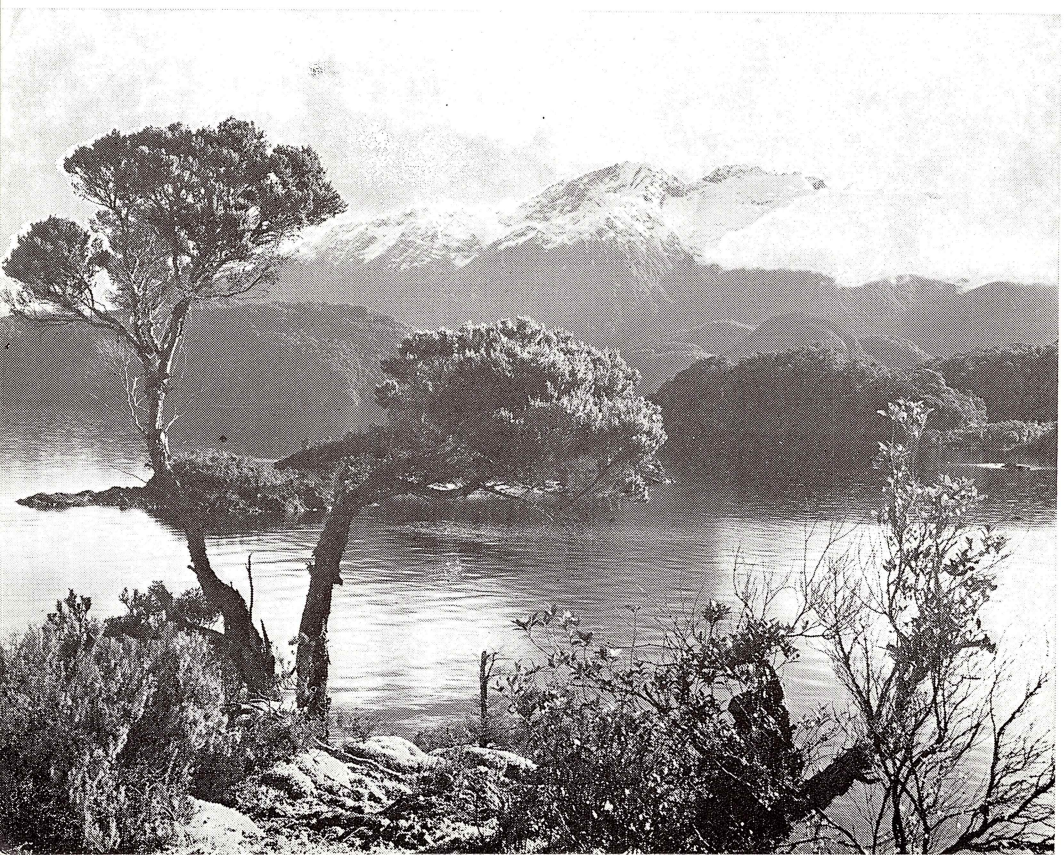
As a major reason for the establishment of the Nature Conservation Council in 1962, the Manapouri hydro-electricity scheme has naturally occupied a large part of the council's attention from the beginning.

In 1960 Lakes Manapouri and Te Anau, within the Fiordland National Park, were the subject of an agreement between the New Zealand Government and an Australian company, which enabled that company to develop the lakes and associated rivers and streams for the generation of electric power, and to ensure a continuing supply for a possible aluminium smelter at Bluff. The Government later took over the responsibility for the building of the power station and for the supply of power to the company, while reserving the right to substantial blocks of power for the national grid.

With the agreement already made and the scheme well advanced, the council's involvement since 1962 was confined to opposition and suggested modifications to the scheme after consultations with the Ministry of Works and the New Zealand Electricity Department, and the urging of the need for more research. Within these inevitable limitations, the council nevertheless managed to have a considerable influence.

The 1963 Government proposals involved the raising of Lake Manapouri by 27 ft and the raising of Te Anau by 7 ft above their respective average levels. Proposed constructions connected with the project included control structures for each of the lakes, an underground powerhouse at West Arm, Manapouri, a tunnel from West Arm to Deep Cove in the Sounds, transmission lines from the power house to the aluminium smelter at Bluff and to the national grid, and access roads and other facilities.

Lake Manapouri



Blue Gum Point, Lake Te Anau

Because of the ecological risks involved, and the damage to scenery, the council was convinced from the beginning that Manapouri should be operated at levels within the recent range, and in the case of Te Anau, as near as possible to this.

The council was successful in suggesting that the Te Anau control structure should be built as close as possible to the outlet and not, as originally proposed, 3 miles downstream.

This ensured the preservation of the natural contour of the shore line, and less effect on the fishing in the area. The council also had some of its recommendations accepted regarding the Mararoa Dam, which will control Manapouri's level. The council, with the National Parks Authority, recommended to the National Government that the dam should be built to a height that would ensure no immediate raising of the lake above natural levels, but with a sufficiently wide base to enable it to be raised later if it were found necessary. This was a compromise which at the time seemed to provide the only alternative to the imminent raising of Manapouri.

With the advent of the Labour Government in 1972 and its declared policy of a narrow-based dam, the eventual raising of the lakes became even less likely. This represents a pleasing endorsement of the Nature Conservation Council's attitude, but the council is still concerned to see that the fluctuating levels of Lakes Manapouri and Te Anau, even within their natural range, should do as little harm as possible to the shore lines.

The Nature Conservation Council has always been aware of the importance of Lakes Manapouri and Te Anau as scenic attractions, and in common with many New Zealanders, whether members of conservation organisations or not, has been concerned that the beauty of the lakes would be impaired or destroyed by altering their natural levels. On the scientific side, it continually pressed for more geological, hydrological, and biological information.

OTHER POWER SCHEMES

When schemes can be discussed at the planning stage, the working arrangements are far more satisfactory than has been the case with Manapouri. The New Zealand Electricity Department often agrees to modifications suggested by the Nature Conservation Council. A notable example of this was the decision to obtain from Lake Pukaki in the South Island, the storage originally planned to be obtained by raising Lake Ohau, one of the last of the unmodified large lakes.

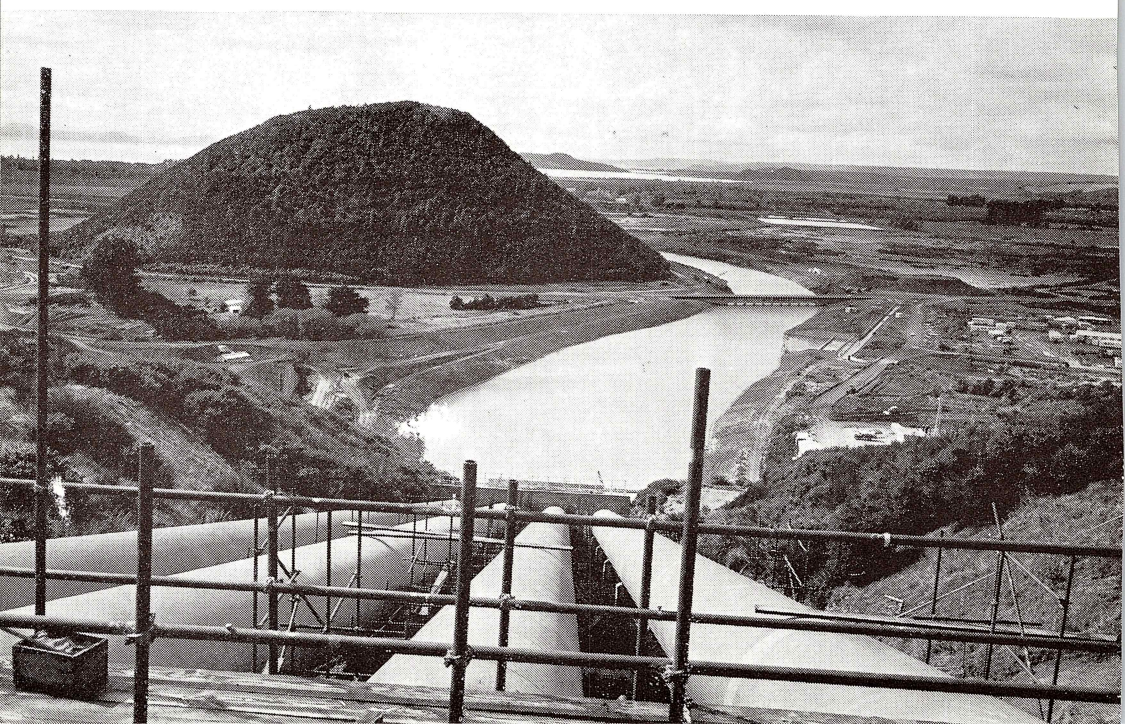
The council has also influenced the Government to abandon its original plans for a hydro-power station on the Kaituna River, which, if it had gone ahead, would have had a great effect on the scenic and recreational values of part of the Kaituna River, including Okere Falls, the well-known trout pool, and Okere Falls Scenic Reserve.

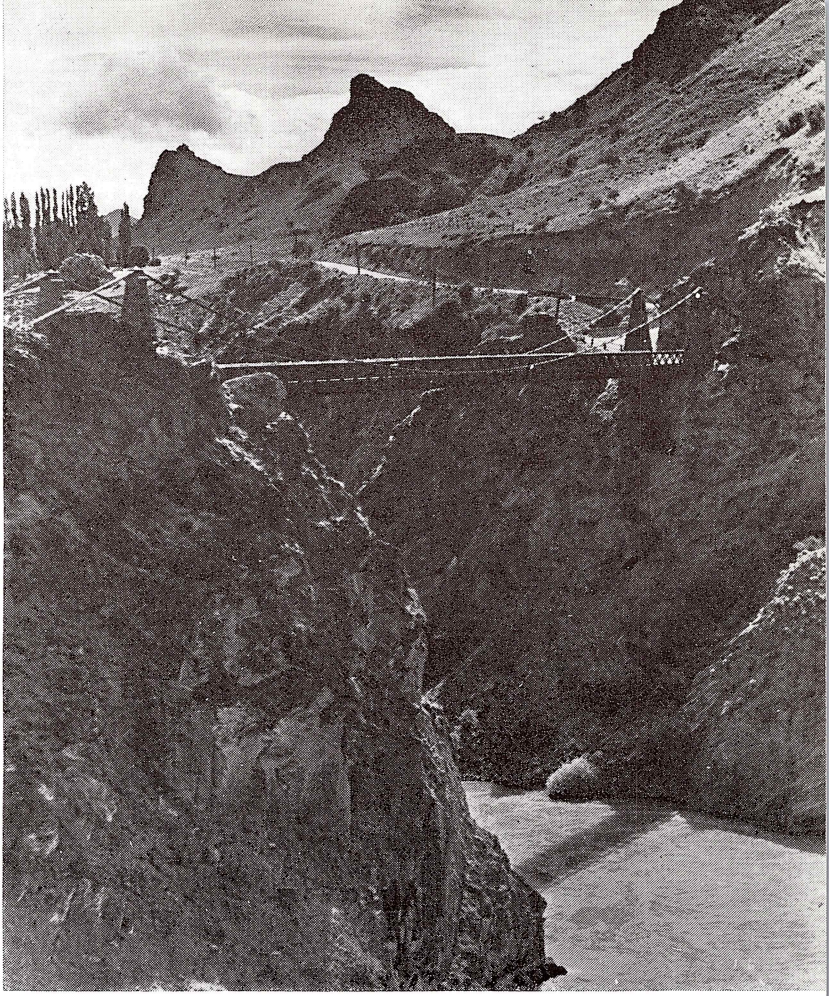
The council has devoted a great deal of its time to the Tongariro power scheme, which it decided not to oppose in 1964 after weighing the country's need for power against conservation considerations. The necessity for more electric power was the decisive factor, but the council had a number of reservations, and insisted that all possible efforts should be made to preserve the Tongariro River for recreation. Some degree of modification and control of the river was regarded as inevitable, but the council made several inspections of the area while work was in progress, to check that harmful effects such as silting and discoloration of rivers were being kept to a minimum, and spoil was being satisfactorily disposed of.

The council made several recommendations to reduce the defacement of the landscape and encouraged the setting up of a fisheries research unit at the new town of Turangi, to provide a system of biological management.

The council has kept a continuing check on the project; conservation measures taken by the Ministry of Works and Development include tree planting, careful removal and placement of fill, and stabilisation and landscaping. The New Zealand Electricity Department has placed an extensive telephone network underground.

Tongariro power scheme—Tokaanu tailrace under construction, 1973





Kawarau Gorge—old bridge

In 1972 the Nature Conservation Council became involved in a controversy concerning the diversion of the Whakapapa River, and helped to determine an acceptable flow of water down the Whakapapa, ensuring that the fish population was not endangered.

The council has been involved in a number of other proposed power schemes, including proposals to develop the Clutha Valley and flood parts of the rugged Cromwell and Kawarau Gorges. The council would prefer to see the building of lower dams than at first proposed, which would cause less flooding and general disruption of present settlements.

Other methods of power generation, such as coal-fired power stations, have been dealt with by the council in terms of their possible environmental effects. Although the big hydroelectric schemes remain the principal sources of power in this country, it is obvious that as this resource becomes fully utilised, the building of more thermal power stations, and later of nuclear power stations, will have to be considered, and their environmental effects weighed very carefully. The question of reducing energy demand, rather than merely trying to meet the growing requirements, is becoming more of an issue.

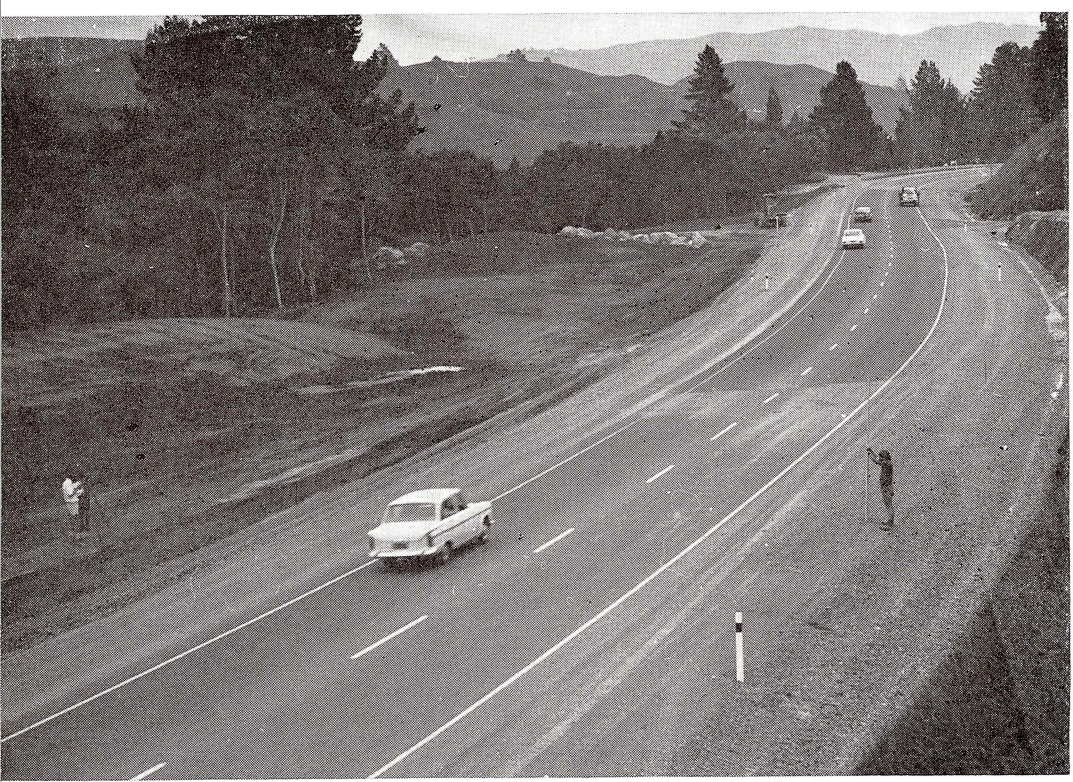
ROADING

The Nature Conservation Council is concerned with the proposed routes of new roads and the realignment of existing ones. Location and landscaping of roads going through national parks, reserves, or scenic areas, come in for special attention.

The first step is to see whether a particular roading project is essential. If it is, plans can be examined to find if any destruction of bush is involved, what the effect on scenery will be, and any other points such as possible damage to rare flora or to fauna habitat. If any valuable natural features are likely to be affected, the possibility of alternative routes, to bypass these features, is looked at.

The National Roads Board already has its own guidelines for road construction, but these have been expanded in co-operation with the council, and good liaison is maintained with National Roads Board and Ministry of Works and Development engineers, who give a lot of attention to landscaping and beautification on State highways. The Nature Conservation Council assists the board in its designation of scenic highways, within the State highway system.

The council has laid down some conservation principles for road and track construction, and these have been widely distributed in the form of an information leaflet. In brief, the council recommends that an absolute minimum of native bush should be cut, and when bush has to be cut, it should be done as close to ground



level as possible and removed or burnt, not pushed back into the remaining bush. Spoil should not be conspicuous, and roadside banks or "batters" should be sloped as naturally as possible, and allow for regeneration. A number of other suggestions apply to the tidying up of works after completion, the desirable avoidance of power and telephone poles, especially in scenic areas, the screening of metal pits or dumps, and the provision of roadside facilities for motorists.

Properly routed and landscaped roads need not detract from the environment. On the contrary, they can harmonise with it, as well as opening up new scenic areas which were previously inaccessible, and providing new lookouts for the sightseer or photographer.

New Zealand roads are, in general, exceptionally good, both from the utilitarian and the scenic points of view.

An example of the practical value of conservation principles is that a well-designed highway which looks right, with well-designed curves properly related to the setting, is usually a safer highway.

The rather questionable viewpoint is sometimes put forward that if an area does not possess a road, it ought to. The council maintains that there are many parts of the country which would be spoiled if roads were put through. For instance, it is opposed to any road being built between Collingwood and Karamea, adjacent to or along the Heaphy Track.

POWER AND TELEPHONE LINES AND HILLTOP INSTALLATIONS

Power and telephone lines, and hilltop installations, especially for radio and television, are now a common feature of the countryside. Purely from the economic point of view, it is usually logical to put lines as straight as possible between two points, or to place masts on the highest sites available. Unfortunately, although economically sound, such a policy can cause unsightly interference with the skyline or carve through irreplaceable stands of native bush and destroy scenery.

Over the years, the Nature Conservation Council has built up an excellent working relationship with the New Zealand Electricity Department and the Post Office, who now take the initiative by coming to the council with their own proposals. Power and telephone line routes have often been changed after council officers have discussed the environmental aspects with engineers.

The council prepared a list of principles for the use of engineers, who do their best to carry them out. Briefly, the points are:

1. Routes for main power and transmission and main telephone lines should avoid national parks and scenic and allied reserves.
2. It is preferable for service supply lines within national parks and areas of scenic value to be underground, but when this is impractical because of technical or physical difficulties, overhead lines should:
   (a) Be kept screened from roads without disturbance of native trees;
   (b) Be clear of views and photographic vantage points;
   (c) Cause as little damage as possible to native bush;
   (d) Be kept back from the roadside as far as possible, and if desirable, specially selected poles, drab-coloured insulators, and short arms on poles should be used.
3. Poles or pylons should be kept away from the skyline.
4. Clearance under or alongside overhead lines should be kept to a minimum.

5. When trees have to be cut:
   (a) They should be cut as near as possible to ground level;
   (b) They should be removed in a way unlikely to endanger surrounding bush or vegetation;
   (c) All slash should be removed.
6. Service lines in built-up areas should be underground.
7. Existing overhead lines should be replaced by underground lines whenever possible.

When it is impossible to avoid putting a line through a scenic reserve, the council often suggests better alternative routes which have less effect on scenery, and require a minimum of bush cutting.

The council considers that the overall position throughout New Zealand regarding the use of hilltops should be very carefully looked at, particularly in view of the amount of duplication by BCNZ, the Post Office, and the Police Department with their installations.

There is obviously a public demand for continued and expanded services. This poses the important question of how much hill and skyline defacement this country should tolerate, in the interests of such services.

MINING

The search for minerals in this country has intensified in recent years, and inevitably national parks and scenic reserves come in for attention as sources of mineral deposits.

The council reports to the Minister of Lands on the effects of any proposed mining privileges over land in a national park or scenic reserve. This means that the council can make recommendations to refuse or permit prospecting or mining in relation to any application made to the Minister of Lands under the Mining Act.

Formal applications do not always give details concerning the method of prospecting, the type of equipment to be used, the type of access that will be necessary, the amount of bush clearing involved, the size and number of intended excavations, and the method of disposing of spoil. A council officer usually inspects the site to gain more information.

In some areas, including those which have special scenic and scientific value and have so far remained untouched, the council wants no mining permitted under any circumstances. Reports are sometimes called for from departments such as the DSIR or the Wildlife Branch of Internal Affairs, to find out whether an area should be completely preserved from disturbance.

Where the council does agree to prospecting, strict conditions are usually imposed as a matter of course, limiting the amount of bush that can be disturbed, the extent and type of excavation, and the construction of access tracks and buildings.

Occasionally, after a prospecting right has been granted, a later inspection reveals that the original conditions of the licence are not being met. When this happens, the council notifies the Department of Lands and Survey, which takes appropriate action.

The council objected strongly in 1968, when a proposed amendment to the Mining Act would have given the Minister of Lands no right to decide whether mining should or should not be permitted in a national park or scenic reserve. The unsatisfactory points in the amendment were later removed.

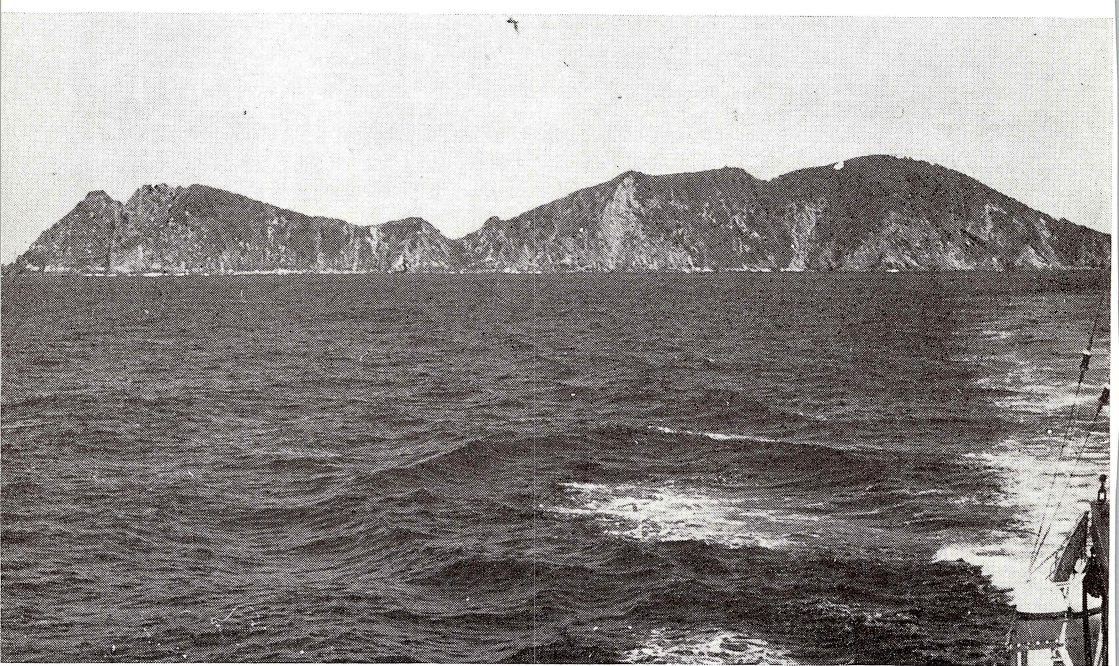
Another recommendation of the council was that compulsory restoration after completion of open-cast mining should be built into the regulations.

In 1968 the Nature Conservation Council was asked by the Government to suggest ways of protecting flora and fauna on Coppermine Island and the adjacent Whatupuke Island if a prospecting warrant were granted. The council participated in drafting protective restrictions never before imposed on a prospector, which ensured that effects on the environment were kept to a minimum.

The council believed that prospecting rights could be treated independently of mining rights; in the event, the question of mining rights never arose, because of the low grade of copper discovered. The controversy that had arisen about the exploitation of Coppermine Island died a natural death.

In the case of an application for a prospecting warrant for the neighbouring Hen Island, biologically richer than Coppermine Island, the council opposed any kind of intrusion, being determined that the island should be kept as a sanctuary. The application was later withdrawn.

Coppermine Island



Air pollution, Christchurch

POLLUTION

New Zealand has so far not felt the full impact of pollution; in this respect, our environmental problems are less severe than those of most developed countries. The air of our cities is still relatively pure, and although Auckland and Christchurch in particular give some cause for concern, they are not yet shrouded by the dense, unhealthy smog typical of Los Angeles or Tokyo.

Similarly, our lakes and rivers, although some are endangered, do not resemble the lifeless cess-pools that waterways in some other countries have become.

But it should be remembered that we are in an early stage of industrialisation, and our population is small. Given these factors, our record is not particularly praiseworthy, and if we are complacent, at the rate we are going our pollution problems will certainly become much more severe than they are at present.

The Nature Conservation Council is very much aware of this, and it is obvious from the cases that are now being investigated by its staff that pollution in all its forms is slowly but surely increasing, and at the same time attracting more public attention.

AIR POLLUTION

The Nature Conservation Council has not so far been called upon to consider many cases of air pollution, although there are a number of Government departments and private organisations—such as the Department of Health and the Clean Air Society—which are concerned with the problem.

WATER POLLUTION

Water pollution presents a rather more urgent challenge. As with air pollution, existing legislation is far from perfect, although more comprehensive. Like much existing legislation with a conservation bias, it is not so much the framework, as the implementation and enforcing of laws, that leaves room for some tightening up.

Water pollution comes basically under the National Water and Soil Conservation Authority and its subsidiary councils which are responsible for classifying waters. Trout do not need water as pure as that used for drinking, for instance, but cannot tolerate water below a certain standard. Water purity is relative, according to its use, but there is a standard below which no water should ever be allowed to fall.

Pollution of water can come from many sources. From sewage outfalls, chemical or natural wastes from factories, run-off of chemical fertilisers from agricultural land, and dumping of wastes and oil from ships, amongst other things.

It is often a vicious circle, for pollution creates more pollution: chemical fertilisers flow into lakes and cause increased growth of weed (eutrophication or enrichment) until the oxygen demands made on the water are too great, and it becomes "anaerobic" or airless, and all life is choked. The result can be a stagnant, lifeless patch of water of no use to anybody or anything.

The Nature Conservation Council is becoming more involved in such matters as the siting of sewage treatment plants, pollution by shipping and pollution of lakes, estuaries, and harbours.

HARBOURS AND ESTUARIES

The Nature Conservation Council has been receiving an increasing number of complaints about harbour reclamation in various parts of the country, including Invercargill, Wellington, Auckland, and Nelson.

The chief purpose of harbour boards, in the council's opinion, is to ensure the safe handling of shipping and to provide facilities for loading and unloading. The council believes that land for industry should be provided by better use of what is available, and not by reclamation.

Harbour reclamations have a number of undesirable effects:

- Natural beauty is changed or destroyed by the alteration of a shore line.
- There is an increased possibility of pollution, particularly if reclamation is used for industry.
- Fish, shellfish, and seabirds are affected.
- Tidal currents are changed, causing alteration in silting.
- The public are deprived of access to the water, and opportunities for recreation such as swimming and boating can be reduced.

The fact is often overlooked that estuaries are not merely vast expanses of mud flats and dirty water. They are amongst the most productive of all environments, serving as breeding grounds for fish, and supporting large numbers of sea birds.

For that reason, harbours and estuaries are vital links in the natural chain. If we break this chain through pollution and reclamation, we lose irreplaceably rich habitats.

WETLANDS

Sir Robert Falla, former Chairman of the Nature Conservation Council, has said:

> "If any feature of the New Zealand landscape has suffered more than another from public indifference to its fate, it is surely the complex of swamps and shallow lakes, once so vast, and now shrunk to a few remnant areas."

The conversion of the country's remaining wetlands into agriculturally productive lands has now gone so far that only remnants of the natural wetlands are left in the lower Waikato, Thames Valley, Manawatu, and Wairarapa in the North Island. There are even fewer in the South Island, although Canterbury has Lake Ellesmere, and Otago had comparable wetlands of lesser size until recently.

The process still goes on at an alarming rate, and as more areas are drained, the water birds lose more and more of their natural habitat, and humans lose more opportunities for recreation.

The Nature Conservation Council is fortunately not alone in its alarm about the situation, and it has combined forces with the Royal Forest and Bird Protection Society, Acclimatisation Societies, and the Wildlife Branch of Internal Affairs, in salvage attempts.

A small part of Lake Wairarapa (Boggy Pond) and about one-third of Lake Tuakitoto in Otago have been preserved from planned drainage, but these are only token remnants. The council thinks it is time for a more positive attitude to the conservation of wetlands in their entirety. The need to face this problem is now recognised in every progressive country.

Lake Tuakitoto

Pukekura Scenic Reserve

PARKS AND RESERVES

A large part of the country comprises parks and reserves which are administered through the Department of Lands and Survey. Reserves are usually set up for the protection of native trees, plants, and birds, when their existence would otherwise be threatened. Other reasons, such as unique scenic features or archaeological importance, are also taken into account.

The Nature Conservation Council is constantly being asked by individuals and organisations such as the New Zealand Ecological Society to press for the establishment of more reserves.

Forest parks have also been established, administered by the New Zealand Forest Service.

Beech Forest, Matakitaki Valley, West Coast, part of project area

NATIVE FORESTS

The Nature Conservation Council wishes to see as much as possible preserved of New Zealand's remaining stands of native forests and bush. It is opposed to the extent of planned "conversion" from native trees to exotic pines, and believes that more effort should be made to manage native forests or to use waste areas for planting pines.

The council believes there must be more awareness of the value of native forests, and that our flora should be spread throughout the country, as a natural part of the environment, and not regarded as a series of "museum pieces" to be virtually confined to national parks.

SOUTH ISLAND BEECH

The plans of the New Zealand Forest Service to utilise extensive stands of beech forests on the West Coast and in the Southland-Otago areas of the South Island, raised another important issue which replaced Manapouri as the major conservation controversy in this country.

There has been uncertainty about just how much of the beech is actually earmarked for use under the scheme. However, it is certain that if the proposals go ahead a substantial proportion of the lowland beech in the South Island will be cut, and a large part of this, in turn, will be converted to stands of the faster-growing radiata pine.

The Nature Conservation Council, although it recognises that some areas of beech can be managed as a renewable resource, is concerned that large areas of the West Coast in particular will be completely altered, scenically and biologically, by the proposed conversion of beech to pine forests, despite assurances to the contrary from the Forest Service. The whole character of a unique part of New Zealand will thus be irredeemably changed.

The council therefore found the conversion proposals unacceptable, and it recommended that the West Coast scheme should be held in abeyance, at least until biological, hydrological and other surveys had been carried out, and until more evidence was available to forecast the results of any scheme in the area. It felt that not enough was known of the feasibility or economic benefit of the West Coast scheme, to justify its acceptance.

It was not certain, for instance, what the result would be of the introduction of large stands of an exotic, totally alien monoculture into an area of very high rainfall and distinctive soil types which has slowly developed its own balance of suitable and varied species over a long period of time.

The council recommended that a limited section of the proposals could go ahead in parts of western Southland, where more biological information was available, and where conditions for utilisation were more favourable. The council welcomed the area of increased reserve provision in the Longwood State Forest, and also the withdrawal of the Catlins area from the proposals, after the strong objections supported by the council.

Since the Nature Conservation Council issued its original report in 1972, the National Development Council and the Environmental Council have issued reports, and an "Environmental Impact Report" was issued by the Officials Committee for the Environment. All these reporting bodies except the Nature Conservation Council—the only body with statutory authority—favoured the Forest Service proposals, and the Government called for tenders from commercial interests for utilisation of beech forests on the West Coast and in Western Southland, excluding Waitutu.

The whole issue is by no means yet decided.

NTMU
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SMITH & BROWNS

THE URBAN ENVIRONMENT

The Nature Conservation Council has recently become more involved in questions of the urban environment. For instance, it has been approached by a number of groups and individuals regarding stability (or instability) of slopes in urban subdivisions.

Particularly in steeper areas, it may be necessary to earthwork virtually the whole of a subdivision, and where the work is carefully planned, and sited on suitably stable land, the long-term result usually compensates for temporary scars and rawness of appearance. In some cases, however, it may have been unwise to begin a project on a certain type of terrain, and there is an obvious need to maintain stricter control, to make sure that such mistakes do not occur.

The council is also concerned that sufficient bush reserves should be set aside in urban areas. For a long time, both on the urban and the rural scene, native bush has been regarded too much as simply a rather annoying barrier to development of land. Native bush is, in fact, one of New Zealand's greatest natural assets, and should be preserved and allowed to regenerate wherever possible, if this country is to retain and enhance its unique character.

AGRICULTURAL CHEMICALS

The Nature Conservation Council has long considered that more knowledge is needed of the environmental effects of chemical herbicides and pesticides used in agriculture.

A chemical may successfully exterminate an unwanted weed, but could just as successfully harm wildlife.

It is seldom possible to alter one natural process without triggering off other, possibly unwelcome, effects.

The same principle applies to the overuse of chemical fertilisers, which may make crops grow better, but can drain off into rivers and lakes, causing increased weed growth.

WILDLIFE

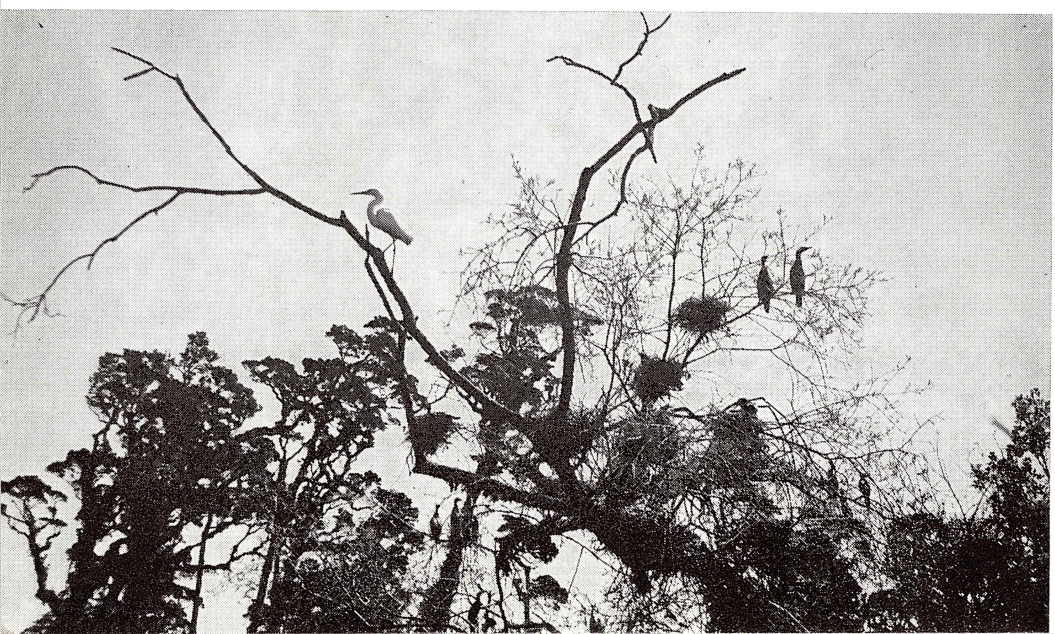
The conservation of wildlife is generally the province of the Wildlife Division of the Department of Internal Affairs, but the council is constantly involved in matters relating to wildlife in some form or other.

Because of a change of water flow near the white heron colony in the Westland National Park, the council suggested that investigations should be made by scientists into the reserve, and the possible consequences of the change.

The council expressed concern to the Marine Department at the possible exploitation of the giant crab on the Campbell and Auckland Islands, and asked about proposed measures to assess and conserve their population. The point was made that too often conservation measures stop short on the landward side of high water, while pollution and exploitation is increasingly affecting the seaward part of the environment. The increasing pressure to establish marine reserves is now helping to improve the situation.

Much of the council's concern for wildlife has expressed itself in recommendations for reservation of habitat.

White heron colony, Westland



RESEARCH AND ACTION

The Nature Conservation Council has been pressing for some time for the establishment of an independent ecological research organisation in New Zealand. It will be obvious from some of the examples mentioned in this booklet that there is a great need for more and independent research.

To help ensure New Zealand's environmental welfare, a coherent, far-reaching policy is called for: a plan of action backed up by research in many fields of science.

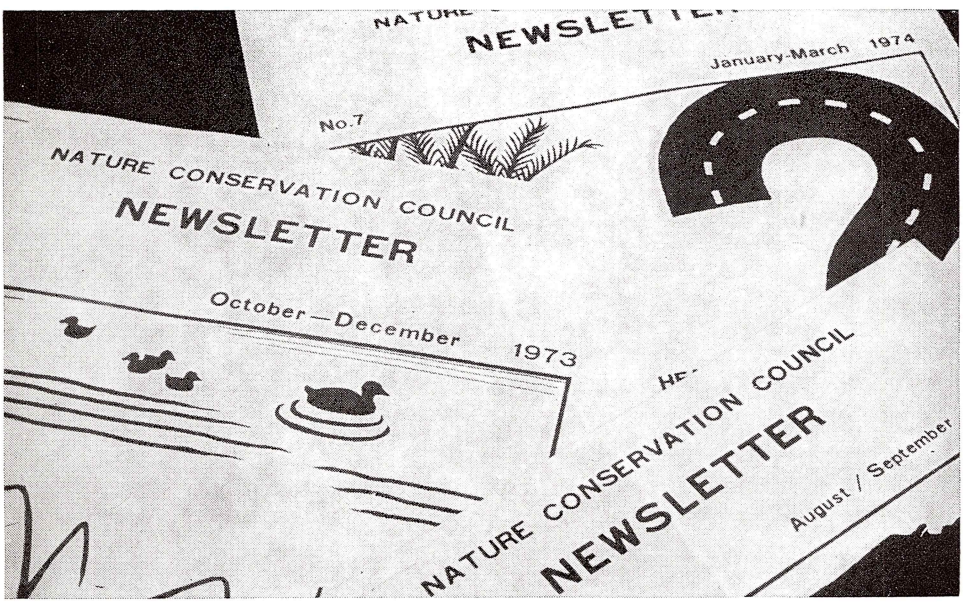
Amongst other things, the creation of the post of Minister for the Environment, and the establishment of the Commission for the Environment to audit environmental impact reports, are hopeful signs, but there are still gaps to be filled.

EDUCATION AND PUBLICITY

The Nature Conservation Council exchanges information with various conservation organisations and individuals, both in New Zealand and overseas. It is a member of the International Union for the Conservation of Nature and Natural Resources (IUCN), based in Morges, Switzerland.

A number of information leaflets have been issued on such topics as the Manapouri power scheme, the Clutha River development proposals, and the proposed utilisation of the beech forests, as well as a pamphlet on *Saving Electricity in the Home.* These appear periodically, but in addition, the council regularly publishes a newsletter which deals with the specific concerns of the council, as well as more general topics.

The council is supplying information in response to an increasing number of requests and is now placing more emphasis on this side of its work.



NEW ZEALAND IS IN OUR HANDS

CONSERVATION WEEK

An example of the Nature Conservation Council's practical involvement in conservation education has been its sponsorship of the National Conservation Week campaign each year, which promotes conservation activities, especially amongst young people.

A National Conservation Week Campaign Committee, comprising representatives of some of the main Government departments and the Scout Association and Girl Guides, organises the campaign at the national level and produces display material, newsletters, and activity leaflets.

But the main emphasis is placed on the voluntary efforts of local committees throughout the country, and the involvement of local people in the environmental health of their own community.

Although Conservation Week lasts only for a limited period, its aim is to encourage environmental awareness and action at all times.

CONCLUSION

This booklet can give only a very incomplete idea of the work and achievements of the Nature Conservation Council over the first decade or so of its existence.

It provides at least some examples where the council has influenced planning and development for the better.

More environmental problems are arising all the time, and will continue to do so: the council has entered its second decade more aware than ever of the urgency of its task.

The largest proportion of the council's work is unspectacular, and does not hit the headlines; but every instance of an estuary saved, or a piece of bush rescued from destruction, has meant one more victory for the conservation cause.

The council is under no illusion that its collective decisions are always perfect, or that it has all the answers. The important thing is to try and ask the right

questions, and to make some contribution towards educating the Government and the people of New Zealand about the necessity for conservation: not conservation just as a conveniently vague ideal to which politicians may expediently pay lip service, but conservation in practice, in specific cases and backed up by research.

Our natural environment, our land and its resources, are a valuable heritage, essential for our welfare and for the welfare of those who will come after us. Can New Zealand become an environmental model for the rest of the world? It is we who must decide that—now.

COUNCIL MEMBERS: 1975

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Mr J. M. Bennett, Havelock North.
Dr C. W. Burns, Dunedin.
Mr M. B. Elliott, Auckland.
Sir Robert Falla, Wellington.
Mr J. H. Miller, Wellington.
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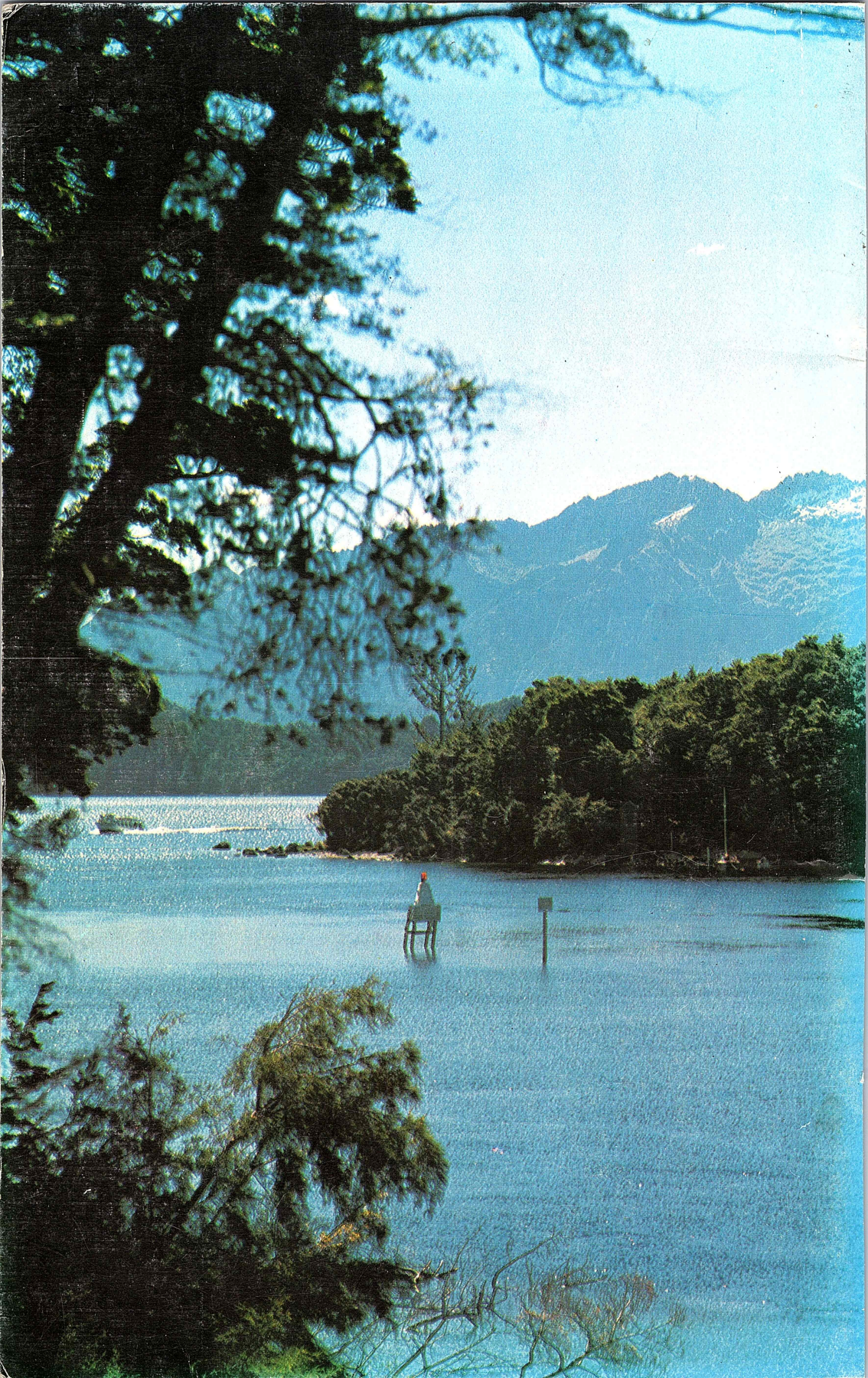
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